

Example #1. A 6.0 kg mass is raised from 1.5 m above the ground to 6.5 m high.

a) What work is done?

b) What E_p does the mass now have?

$$\begin{aligned} a) \quad W &= \Delta E_p = mg \Delta h \\ &= 6.0 (9.8) (6.5 - 1.5) \end{aligned}$$

$$\boxed{W = 2.9 \times 10^2 \text{ J}}$$

$$b) \quad E_p = mgh = 6.0 (9.8) (6.5)$$

$$\boxed{E_p = 3.8 \times 10^2 \text{ J}}$$